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EXAMINER

CHAI, LONGBIT

ART UNIT

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2431

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/992,823	Applicant(s) WONG ET AL.	
	Examiner LONGBIT CHAI	Art Unit 2431	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47, 49-54, 63 and 64 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-47, 49-54, 63 and 64 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2431

DETAILED ACTION

1. Currently pending claims are 1 – 47, 49 – 54 and 63 – 64.

Response to Arguments

2. In view of the Remarks filed on 5 January 2009 and the new Guidance for 35 USC § 101, PROSECUTION IS HEREBY REOPENED. A set of new ground of rejections is set forth below.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1, 17, 47 and 49 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps or acts to be performed, a statutory “process” under 35 U.S.C. 101 must (1) be tied to particular machine, or (2) transform underlying subject matter (such as an article or material) to a different state or thing. See page 10 of In Re Bilski 88 USPQ2d 1385. The instant claims are neither positively tied to a particular machine that accomplishes the claimed method steps nor transform underlying subject matter, and therefore do not qualify as a statutory process. Examiner notes by not limiting the sending source to a particular machine, in the sending step, such a claim limitation is broad enough that the claim could be completely performed mentally or verbally (i.e. without a machine) nor is any transformation apparent. Any other claims not addressed are rejected by virtue of their dependency.

Art Unit: 2431

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 49 and 51 are rejected under 35 U.S.C. 102(e) as being anticipated by Eskicioglu et al. (U.S. Patent 6,409,089).

As per claim 49, Eskicioglu teaches a method comprising the steps of:

sending a first encrypted data associated with an application to a peripheral device (Eskicioglu: Column 4 Line 24 – 26: (a) the encrypted dynamic key is transmitted to a smart card, which is qualified as a peripheral device of a computer and (b) according to Dictionary.com, a peripheral device is merely a computer device that operates separately from the CPU but is connected to it).

decrypting, at the peripheral device, the first encrypted sensitive to generate a plaintext data (Eskicioglu: Column 4 Line 24 – 26: the encrypted key data after being decrypted is qualified as a plaintext data).

providing the plaintext data to the application (Eskicioglu: Column 4 Line 24 – 26 / Line 13 – 14: the decrypted key data is used by the ciphering applications).

As per claim 51, Eskicioglu teaches the first encrypted data includes an encrypted version of one of: a private encryption key, a private decryption key, a chip ID, and a device ID (Eskicioglu: Column 4 Line 24 – 26 / Line 13 – 14).

Art Unit: 2431

3. Claims 49 and 52 are rejected under 35 U.S.C. 102(e) as being anticipated by Smith et al. (U.S. Patent 2003/0009679).

As per claim 49, Smith teaches a method comprising the steps of:

sending a first encrypted data associated with an application to a peripheral device (Smith: Para [0054] Line 15 – 20: sending an encrypted control code to a hardware device).

decrypting, at the peripheral device, the first encrypted sensitive to generate a plaintext data (Smith: Para [0054] Line 17 – 20: decrypting the control code at the hardware device).

providing the plaintext data to the application (Smith: Para [0054] Line 15 – 20: providing the decrypted control code to the configuration applications).

As per claim 52, Smith teaches the application includes a software driver (Smith: Para [0054] Line 15 – 20: providing the decrypted control code to a configuration application, which is qualified as one type of software driver applications to perform the system configuration functions).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2431

4. Claims 1 – 3, 8, 9, 13, 16, 31, 33, 37– 38, 40, 41, 43, 46, 47, 63 and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daellenbach @ Provisional et al. (U.S. Patent 2003/0168508), hereafter referred as Daellenbach, and in view of Ciacelli (U.S. Patent 6,236,727).

As per claim 1, 31, 40 and 47, Daellenbach teaches a method comprising the steps of: **sending a first encrypted** (see Daellenbach below) **routine of a software driver to a peripheral device** (Daellenbach: Provisional SPEC Section 3.3.7: a device driver used by a peripheral device can be downloaded for update on a needed basis), **wherein the software driver is to interface with the peripheral device** (Daellenbach: Provisional SPEC: Page 7, Section 3.3.7 / Line 4: (a) Daellenbach teaches “a device driver” and Examiner notes (b) a device driver is indeed a software driver that interfaces with a peripheral device and (c) according to Dictionary.com, a peripheral device is merely a computer device that operates separately from the CPU but is connected to it).

However, Daellenbach does not disclose expressly that the routine sent to the device is encrypted.

Ciacelli teaches **a routine sent to the device should be encrypted** (Ciacelli: Column 5 Line 43 – 45 / Line 46 – 48 / Line 53 – 60: transmitting the encrypted routine / algorithm to a device).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Ciacelli within the system of Daellenbach because (a) Daellenbach discloses a device driver used by a peripheral device can be downloaded for update on a needed basis if security requirements are met (Daellenbach: Provisional Section 3.3.7) and (b) Ciacelli teaches a security enhanced mechanism protecting

Art Unit: 2431

the software routine / algorithm / data during the transfer to a hardware device by using encryption / decryption techniques so that the security requirements can be met accordingly (Daellenbach: Column 1 Line 10 – 14 and Column 5 Line 43 – 45 / Line 46 – 48 / Line 53 – 60).

decrypting, at the peripheral device, the first encrypted routine to generate a plaintext routine (Ciacelli: Column 5 Line 46 – 48 / Line 43 – 45 / Line 53 – 60: (a) decrypting the received software / routine at the hardware device (b) an encrypted version of actual decryption / encryption software routine (algorithm) matches the first encrypted routine – This is also consistent with dependent claim 2 and 3, (b) encrypted driver software must be decrypted so that it can be used to perform driver function and (c) the encrypted driver software after being decrypted is qualified as a plaintext routine).

providing the plaintext routine to the software driver (Daellenbach: see above: a device drive is a software routine used by the software driver at the a peripheral device).

As per claim 2, Daellenbach as modified teaches the first encrypted routine is an encrypted version of an encryption routine (Ciacelli: Column 5 Line 43 – 45 / Line 53 – 60 & Daellenbach: the transferred software routine to a peripheral device can be an update of encryption / decryption algorithm routines).

As per claim 3, Daellenbach as modified teaches the first encrypted routine is an encrypted version of a decryption routine (Ciacelli: Column 5 Line 43 – 45 / Line 53 – 60 & Daellenbach: the transferred software routine to a peripheral device can be an update of encryption / decryption algorithm routines).

Art Unit: 2431

As per claim 8, 33 and 38, Daellenbach as modified teaches sending a decryption code to the peripheral device, where the decryption code is to be used by the peripheral device to decrypt the first encrypted routine (Ciacelli: Column 5 Line 45 – 60).

As per claim 9, Daellenbach as modified teaches removing the plaintext routine (Ciacelli: Column 7 Line 16 – 21).

As per claim 13, Daellenbach as modified teaches selecting the first encrypted routine from a plurality of different encrypted routines, wherein the plurality of different encrypted routines are functionally equivalent (Ciacelli: Column 5 Line 53 – 60: the routines used for the purpose of driver software updates are indeed being selected from a plurality of driver routines with different revisions).

As per claim 16, Daellenbach as modified teaches providing includes storing the plaintext routine in a location in memory accessible by the software driver, and where the location in memory is known to the software driver (Daellenbach & Ciacelli: see above: the plaintext device drive routine must be, first, stored in the memory somewhere and secondly, must be known to the software device driver so that the driver functions can be performed and executed accordingly by the device driver).

As per claim 41, Daellenbach as modified teaches said first interface and said second interface are implemented using a same interface (Daellenbach & Ciacelli: see above: the plaintext device drive routine must be, first, stored in the memory somewhere and secondly,

Art Unit: 2431

must be known to the software device driver so that the driver functions can be performed and executed accordingly by the device driver).

As per claim 43, Daellenbach as modified teaches the first hardware component and the second component are implemented using a same hardware component (Ciacelli: Column 5 Line 43 – 48: the same hardware component of decryption module to receive and execute the decryption function for encrypted routine).

As per claim 37 and 46, Daellenbach as modified teaches the hardware component is a dedicated hardware component (Ciacelli: Abstract Line 15 – 17, Column 2 Line 55 – 63, Column 5 Line 46 – 48 / Line 43 – 45 / Line 53 – 60).

As per claim 63, Daellenbach as modified teaches processing data at the peripheral device using the plaintext routine (Ciacelli: Column 5 Line 46 – 48 / Line 43 – 45 / Line 53 – 60: see above).

As per claim 64, Daellenbach as modified teaches decrypting data at the peripheral device using the plaintext routine (Ciacelli: Column 5 Line 46 – 48 / Line 43 – 45 / Line 53 – 60: see above).

5. Claims 10 – 12, 32, 39, 42 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daellenbach @ Provisional et al. (U.S. Patent 2003/0168508), hereafter referred as Daellenbach, in view of Ciacelli (U.S. Patent 6,236,727), in view of Hendricks et al. (U.S. Patent 7,298,851).

Art Unit: 2431

As per claim 10, 32, 42 and 54, Daellenbach as modified does not disclose expressly encrypting, at the peripheral device, the plaintext routine to generate a second encrypted routine, where the second encrypted routine is a version of the first encrypted routine.

Hendricks teaches encrypting, at the peripheral device, the plaintext routine to generate a second encrypted routine, where the second encrypted routine is a version of the first encrypted routine (Hendricks: Column 63 Line 22 – 26: secure storage is done on a memory device at the driver-level, where all information (i.e. including the downloaded driver routine disclosed by Carter) stored on the memory storage device is encrypted by a memory device driver prior to being stored on memory storage device);

providing the second encrypted routine to the software driver (see above – merely for storage purpose (i.e. securely store the content) after being downloaded).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Hendricks within the system of Daellenbach as modified because (a) Daellenbach discloses a device driver used by a peripheral device can be downloaded for update on a needed basis (Daellenbach: Section 3.3.7) and (b) Hendricks teaches a secured mechanism to store all information – i.e. including the downloaded content (Hendricks: Column 63 Line 22 – 26).

As per claim 11 and 39, Daellenbach as modified teaches sending a encryption code to the peripheral device (Daellenbach & Ciacelli: see above), where the encryption code is to be used by the peripheral device to encrypt the plaintext routine (Hendricks: Column 63 Line 22 – 26: encrypting all information prior to storing is indeed including not only data but also routines).

Art Unit: 2431

As per claim 12, Daellenbach as modified teaches the second encrypted routine is a modified version of the first encrypted routine (Ciacelli: Column 5 Line 43 – 45 / Line 53 – 60: updated encrypted / decryption algorithm routines) & (Hendricks: Column 63 Line 22 – 26: i.e. storage version).

6. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daellenbach @ Provisional et al. (U.S. Patent 2003/0168508), hereafter referred as Daellenbach, in view of Ciacelli (U.S. Patent 6,236,727), in view of Wilson (U.S. Patent 4,520,232).

As per claim 14, Daellenbach as modified does not disclose expressly decrypting includes using a map as a decryption key.

Wilson teaches decrypting includes using a map as a decryption key (Wilson: see for example: Column 2 Line 12 – 24).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Wilson within the system of Daellenbach as modified because (a) Daellenbach discloses a device driver used by a peripheral device can be downloaded for update on a needed basis (Daellenbach: Section 3.3.7) and (b) Wilson teaches providing an security enhanced encryption mechanism which is not only fast but also inexpensive with increased security strength (Wilson: see for example, Column 1 Line 28 – 34).

As per claim 15, Daellenbach as modified teaches the map includes a texture map (Wilson: see for example, Column 1 Line 28 – 34: the matrix is qualified as a two-dimensional texture map).

Art Unit: 2431

7. Claims 4 – 7, 34 – 36 and 44 – 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daellenbach @ Provisional et al. (U.S. Patent 2003/0168508), hereafter referred as Daellenbach, in view of Ciacelli (U.S. Patent 6,236,727), and in view of Freeman (U.S. Patent 2002/0129374).

As per claim 4 and 34, Daellenbach as modified does not disclose expressly the peripheral device is a graphics chip.

Freeman teaches the hardware device is a graphic chip (Freeman: see for example, Paragraph [0117]).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Freeman within the system of Daellenbach as modified because (a) Daellenbach discloses a device driver used by a peripheral device can be downloaded for update on a needed basis (Daellenbach: Section 3.3.7) and (b) Freeman teaches a software driver is needed at a multimedia graphic chip, as one type of peripheral devices, to perform the functions of realizing the MPEG adaptation and processing the video data stream (Freeman: Paragraph [0117] and Figure 7 Element 376 & 388).

As per claim 5 – 6, 35 – 36 and 44 – 45, Daellenbach as modified teaches decrypting is performed by a graphics chip (Ciacelli: see for example: Column 3 Line 25 – 43, Column 5 Line 43 – 60 and Column 2 Line 48 – 50).

Daellenbach as modified does not disclose expressly decrypting is performed by a 3D pipe of the graphics chip.

However, Examiner notes Official Notice is taken that a 3D (3-Dimension) engine (or IDCT component) is a well-known series of components inside a video graphic chip.

Art Unit: 2431

As per claim 7, Daellenbach as modified teaches decrypting is performed by dedicated encryption hardware of the graphics chip (Ciacelli: see for example: Abstract Line 15 – 17 and Column 2 Line 55 – 63).

8. Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (U.S. Patent 2003/0009679), and in view of Ciacelli (U.S. Patent 6,236,727).

As per claim 50, Smith does not disclose expressly the first encrypted data includes an encrypted software routine.

Ciacelli teaches the first encrypted data includes an encrypted software routine (Ciacelli: Column 5 Line 43 – 45 / Line 53 – 60).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Ciacelli within the system of Smith because (a) Smith discloses sending an encrypted control code to a hardware device (Smith: Para [0018]) and (b) Ciacelli teaches sending, besides encrypted data, an encrypted algorithm / routine to a hardware device (Ciacelli: Column 5 Line 43 – 45 / Line 53 – 60).

9. Claim 53 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (U.S. Patent 2003/0009679), and in view of Freeman (U.S. Patent 2002/0129374).

As per claim 53, Smith does not disclose expressly the peripheral device is a graphics chip.

Freeman teaches the hardware device is a graphic chip (Freeman: see for example, Paragraph [0117]).

Art Unit: 2431

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Freeman within the system of Smith because (a) Smith discloses sending control code to a hardware device of a portable notebook computer (Smith: Para [0018]) and (b) Freeman teaches a multimedia graphic chip, as one type of peripheral devices associated with a portable notebook computer, to perform the functions of realizing the MPEG adaptation and processing the video data stream (Freeman: Paragraph [0117] and Figure 7 Element 376 & 388).

10. Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eskicioglu et al. (U.S. Patent 6,409,089) and in view of Ciacelli (U.S. Patent 6,236,727).

As per claim 54, Eskicioglu does not disclose expressly encrypting, at the peripheral device, the plaintext routine to generate a second encrypted data, where the second encrypted data is a version of the first encrypted data.

Ciacelli teaches encrypting, at the peripheral device, the plaintext routine to generate a second encrypted data, where the second encrypted data is a version of the first encrypted data (Ciacelli: Column 4 Line 42 – 45: the copyright data such as a scrambling key should be then re-encrypted and stored after use for security purpose);

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Ciacelli within the system of Eskicioglu because (a) Eskicioglu discloses providing an encrypted dynamic key to a peripheral device and then decrypted for the use of scrambling data (Column 4 Line 24 – 26 / Line 13 – 14) and (b) Ciacelli teaches the copyright data such as a scrambling key should be then re-encrypted and stored after use for security purpose (Ciacelli: Column 4 Line 42 – 45).

Art Unit: 2431

Allowable Subject Matter

11. Claims 17 – 30 would be allowable if rewritten or amended to overcome the rejection(s) under **35 USC § 101**, set forth in this Office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LONGBIT CHAI whose telephone number is (571)272-3788. The examiner can normally be reached on Monday-Friday 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y. Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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01/10/2009